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# Notification of Reason(s) for Refusal

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| Patent Application No. | Patent application No. 2005-088403 |
| Drafting Date | March 30, 2007 |
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| Representative / Applicant | Sakaki MORISHITA |
| Applied Provision | Patent Law Sections 29 (1), 29(2) and 36 |

This application should be refused for the reasons mentioned below. If the applicant has any argument against the reasons, such argument should be submitted within 60 days from the date on which this notification was dispatched

## REASONS

-- snip --

[3] The inventions in the claims listed below of the subject application should not be patented under Patent Law Section 29(1)(iii) since they are inventions described in the publications mentioned below which were distributed in Japan or foreign countries or inventions available to the public via electronic communication lines prior to the filing date of the subject application.

Note (see the list of cited documents etc.]

Claims 1-12, 24-31 and 35-43
Cited document 1

Claims 13-17 and 19-23
Cited document 2

Claim 50
Cited document 1 or 2

Remarks

A. With regard to the invention according to claim 1

Cited document 1 describes an invention where a scenario is built relative to an MPU or at least one DSP ("component") based on a task list or a task model (corresponding, respectively, to "operation" and operation related to "thermal attribute"), average power dissipation is calculated, comparison is made with a thermal package model ("heat expected to be generated"). The scenario is corrected (corresponding to "scheduling") when the value of power exceeds a threshold defined in the thermal package model. Accordingly, the invention according to claim 1 of the present application and the invention according to cited document 1 are identical.

B. With regard to the invention according to claim 2

Providing a means for detecting temperature as a means for actually determining average heat dissipation represents merely an addition of well-known technology.

C. With regard to the inventions according to claims 3-10 and 12

These claims do not add any notable technical feature to the invention described in cited document 1. Cited document 1 describes that an integrated circuit has the capabilities to dissipate heat.

D. With regard to the invention according to claim 11

Using power consumption, volume and heat evaluation constant to calculate a heat attribute (amount of heat) is nothing more than a basic calculation in physics.

E. With regard to the invention according to claim 13

Cited document 2 describes an invention where the amount of heat ("heat attribute") is predicted for each step of instruction in a program, and instructions are interchanged or a wait instruction is inserted ("scheduling") if the total expected amount of heat exceeds a limit value ("thermal threshold of a component").

F. With regard to the inventions according to claims 14-17 and 19-23

These claims do not add any notable technical feature to the invention

described in cited document 2. Further, paragraph 0037 of cited document 2 describes adjusting clocks ("determine the operating frequency").

G. With regard to the inventions 24-31

Cited document describes the invention already reviewed in A. These claims do not add any notable technical feature to the invention described in cited document 1.

H. With regard to the inventions according to claims 35-43

The meaning of the first thermal attribute exceeding the threshold and the second thermal attribute not exceeding the threshold, according to claim 35, cannot be known. Notwithstanding this, these claims technically define nothing more than scheduling operations with large thermal attributes and those with small thermal attributes. The listed claims are identical with the invention described in cited document 1.

Allowing for the overall thermal attribute is nothing more than what is ordinary practiced in heat calculation.

I. With regard to the invention according to claim 50

Cited document 1 describes rescheduling tasks among DSPs and MPUs so that power dissipation limit ("thermal threshold") is not exceeded.

Cited document 2 also describes scheduling instructions so that the total amount of heat does not exceed the limit.

It would have been a matter of course to configure the system to determine whether a task is available (whether a task is present).

[4] The inventions in the claims mentioned below of the subject application should not be patented under Patent Law Section 29(2) since they could have easily been made by persons who have common knowledge in the technical field to which the inventions pertains prior to the filing of the subject application, on the basis of the inventions described in the publications listed below which were distributed in Japan or foreign countries or the invention available to the public via electronic communication lines prior to the filling of the subject application.

Note (see the list of cited documents etc.]

Claims 1-12, 24-31 and 35-43
Cited document 1

Claims 13-17 and 19-23
Cited document 2

Claim 50
Cited document 1 or 2

Claim 18
Cited documents 1-2

Claims 32-34, 44-49 and 51-52
Cited documents 1 and 3

Remarks

A. With regard to the inventions according to claims 1-12, 24-31, 35-43 and 50

Cited document 1 describes the invention already reviewed in reason [3]. A skilled person could easily have conceived of the inventions according to claims 1-12, 24-31, 35-43 and 50 on the basis of the description.

B. With regard to the inventions according to claims 13-17, 19-23 and 50

Cited document 2 describes the invention already reviewed in reason [3]. A skilled person could easily have conceived of the inventions according to claims 13-17 and 19-23 on the basis of the description.

C. With regard to the invention according claim 18

Paragraph 0012 of cited document 1 describes computing total energy consumption in a chip by referring to the frequency and the probabilistic activity. It can be said from this description that a skilled person could have appropriately estimated the thermal attribute by counting the number of tasks.

D. With regard to the inventions according to claims 32-34, 44-49 and 51-52

Cited document 3 describes an operating system adapted to adjustable power saving, wherein tasks are assigned to different queues according to the

priority.

The list of cited documents etc.

1. JP 2002-202893
see paragraphs 0006, 0010-0012, 0014 and 0017-0018
2. JP 10-240704
see paragraphs 0015, 0019-0021 and 0028-0031
3. JP 2003-256067
see paragraphs 0023-0027 and Fig. 2